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ABSTRACT

This booklet, in question-and-answer format, is intended to guide service providers in colleges and universities in supplying required special services to students who are hard of hearing. Introductory material explains the mission and objectives of PEPNet, which is to provide the coordination and collaboration in technical assistance to postsecondary educational institutions to improve access and accommodation for individuals who are deaf or hard of hearing. Some of the issues addressed by the 35 questions include: implementing assistive technology in the classroom, assistive technology and the Internet, current hearing aids, service coordination at the institutional level, captioning services, educator training, requirements of "equal access accommodation," responsibility for paying for an interpreter, use of volunteer note takers, cochlear implants, students who are both blind and hard of hearing, students who have difficulty speaking, source of qualified individuals in captioning techniques, socialization of deaf and hearing students, sign language, and course substitutions for foreign languages. (DB)

Providing Services for Students who are Hard of Hearing In Postsecondary Education

Questions and Answers

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and the Postsecondary Programs Network (PEPNet)*

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David Buchkoski
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This publication is also available upon request on audiotape or in Braille.

Introduction

On March 15, 2001, the Midwest Center for Postsecondary Outreach, in collaboration with the Postsecondary Program Network, hosted a video teleconference in which the authors of this document appeared. Due to time constraints, the panelists were unable to respond to all of the questions submitted. This document provides viewers technical assistance with several of those questions. The information provided is intended to serve as a guide in assisting service providers, working in colleges and universities at large, and others, in understanding the obligation of institutions of higher learning to serve students who are hard of hearing. A video copy of the full live teleconference is available from the PEPNet Resource Center at the National Center on Deafness, California State University – Northridge. For further information on providing services to hard of hearing students, readers are encouraged to contact the regional technical assistance center serving their region.

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Preface

The questions and responses in this handbook were identified during the March 15, 2001 live satellite broadcast "Services for the Hard of Hearing Student in Postsecondary Education."

The authors of this document served as panelists during that teleconference. For further information on these and other subjects related to serving deaf or hard of hearing students in postsecondary education, contact the PEPNet regional center in your region. This booklet can also be found on the PEPNet website www.pepnet.org.

I would like to thank Ms. Sharaine Rawlinson of California State University - Northridge, for her contributions in the production of the teleconference and her work as the program moderator, and Dr. Sam Trychin, Dr. Cheryl Davis, of Western Oregon University, and Corinne Brennan-Dore of the University of Massachusetts - Amherst, for serving as panelists.

David Buchkoski
MCPO Training Coordinator

PEPNet Mission

The mission of PEPNet is to promote opportunities for the four Regional Postsecondary Centers for Individuals who are Deaf and Hard of Hearing to coordinate and collaborate in creating effective and efficient technical assistance to postsecondary educational institutions, thereby providing access and accommodation to individuals who are Deaf or Hard of Hearing.

PEPNet Objectives

- To improve postsecondary access and transition opportunities for individuals who are Deaf or Hard of Hearing;
- To develop a national design for technical assistance and outreach service delivery to assure that postsecondary institutions and the students they serve will benefit from PEPNet's collaboration and coordination efforts;
- To expand the knowledge and skill of postsecondary institutions related to the provision of educational support services for Deaf and Hard of Hearing students;
- To increase networking among postsecondary educational institutions;
- To increase the postsecondary enrollment, retention, graduation and employment rates of students who are Deaf and Hard of Hearing.

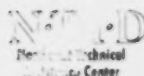


Western Oregon
Outreach and Development Center

Western Oregon
Outreach and Development Center



Midwest Center
for
Postsecondary
Outreach



National Center
for Technical
Assistance



Postsecondary
Education
Consortium

Providing Services for Students who are Hard of Hearing In Postsecondary Education

QUESTIONS AND ANSWERS

1. What can an instructor do to enhance communication for the student with a hearing loss during class discussions? Communication changes dramatically when students must wait for a microphone to be passed around.

Group discussions are among the most difficult communication situations for individuals who are hard of hearing. Assistive listening devices are often used in classroom settings and are most beneficial in lectures with one speaker. But as the question implies, the microphone must be passed from speaker to speaker in group discussions in order for the hard of hearing student to benefit from it (although brief comments can be repeated by the instructor into the microphone eliminating the need to pass it around). Another option is to have several mics available throughout the room. The ALD would be connected into the mixer for the mics so that anything that is said into any of the mics is sent to the ALD receiver.

Some people see this as a loss of spontaneity and thus a disadvantage. In reality, a) many students benefit from a certain amount of control over group discussions; b) calling on students before they speak gives the hard of hearing student time to visually locate the speaker (to take advantage of speech reading where distance, lighting, and line of vision allow); and allows time for the mic to be passed; c) Students pay more attention to speaking loudly,

which benefits everyone in settings with poor acoustics; d) Everyone has a chance to be heard because people are not speaking over each other; e) Students have a moment to compose their thoughts and may be more brief and organized in their comments; f) Notes are easier to take from the discussion with the slightly reduced pace; g) More students are able to think of ideas to present because there is more "breathing room" in the discussion; and h) Students who are shy and who normally have difficulty asserting themselves where more talkative students control the discussion, have a chance to raise their hands and be called on.

Nonetheless, a great deal of commentary will be lost for the hard of hearing student unless the instructor and class participants are committed to speaking into the mic. Additionally, there are students who are dependent on amplification *and* speechreading to understand the message reliably. Unfortunately, speechreading is not a viable option in most group discussions. When microphone use is not working, the best option is to employ some form of CART (Communication Access Realtime Translation), such as realtime captioning (<http://cart.ncraonline.org>), or a summary speech-to-text service such as C-Print (<http://netac.rit.edu/c-print.html>) or TypeWell (<http://www.typewell.com>). The discussion would still need to be controlled to the extent that people do not speak over each other, but the hard of hearing student would now have access to the vast majority of the class discussion.

2. Could you suggest resources to address assistive technology as they relate to Internet access, "streaming audio" and other sound-related components for students with hearing loss?

Many web pages now include not only archived video and audio files that can be accessed with a click of the mouse, but also live 'streaming' video and audio of actual performances and events (i.e., a live webcast). Making audio information available via an alternative text format helps not only viewers who are hard of hearing and deaf, but second language learners, students learning to read, those students in noisy environments, as well as those in the workplace, libraries, and classrooms where audio may not be allowed.

What does an accessible web page that includes audio and video information look like? To view several options that include both captioning for hard of hearing users and audio descriptions for users who are visually impaired, go to <http://www.abletv.net>. You'll need to download the most recent versions of *Windows Media Player* or *RealPlayer* in order to view the captions. (Note: it is not necessary to download the premium programs, only the most recent freeware versions.) Once installed, you must turn on the access options in these programs. When using the Real G2 Player, open the player, then choose View | Preferences | Content | Accessibility Settings | Use accessibility features when available. Make sure that the accessibility features (e.g., "Show captions") are checked. When using the Microsoft Windows Media player, open the player, choose View | Now Playing Tools. Make sure that both "Show Equalizer and Settings" and "Captioning" are checked. (Note: this will not caption all videos on the

Internet; it will only show the captions that were developed for specific videos and built into the web page.)

There are several very good resources to help you make audio/video information on the Internet (and CD ROM) accessible. The National Center on Accessible Media at WGBH has developed a free program *MAGpie* (Media Access Generator) that is downloadable from their website <http://ncam.wgbh.org>. *MAGpie* can be used to caption *QuickTime*, *SMIL* (Synchronized Multimedia Integration Language), and Microsoft's *SAMI* (Synchronized Accessible Media Interchange) formats. It can also be used to add audio descriptions. *SAMI* can also be used to add captioning. Information is available at <http://www.microsoft.com/enable/sami/>.

On the other hand, live audio and video require a different process. The author is aware of one company that currently offers synchronized captioning within a live webcast video stream. Their process, called *Webcapturing*, is a pay service. For more information, go to <http://www.abletv.net>.

However, making archived video on the internet accessible first requires a transcript. Many campuses are considering developing positions for print access service providers (see CART, C-Print, and TypeWell websites above) but are afraid they will not have enough class hours to justify the position. Remember that these transcription skills can be used to provide transcripts of the classroom activities, audio information on campus websites, and videos in your libraries that are awaiting captioning.

3. More hard of hearing students are using the new digital hearing aids, transmitters and receivers for lecture classes. Can you talk about the differences between this new technology and old hearing aids and FM systems, and what those improvements mean for students on a day-to-day basis?

Hearing aids pick up sound within a 10-20 foot radius, and amplify all sounds in the prescribed frequency range. This makes background noise (neighboring students, overhead projectors, air conditioning, reverberation) a serious problem for hearing aid users in classroom settings. The more you increase the hearing aid amplification, the more you turn up the background noise. Newer hearing aids (digital or analog) can be purchased with options on them that help alleviate some of these problems. Some users find that a 'directional microphone' option is all they need to be able to understand speech in a noisy setting. Instead of picking up sound from all directions, they only pick up sound from the front (the usual position of someone speaking to you). For others, this option helps but is not enough in and of itself.

Some hearing aids are being sold with the assistive listening device built in (some can also have the device added on as a "boot"). They have an antenna and receiver on the hearing aid, and a separate, wireless microphone/transmitter. The microphone can be set on a table in a noisy restaurant, or worn around the neck of the speaker. It can be adjusted so that it takes in sound from all directions or only from the front. The receiver is built into (or snaps onto) the student's hearing aid so that an additional piece of equipment is not necessary. Convenience for the student is the main advantage.

Although hearing aids are versatile, they will not work in every situation. They have the same problems as separate assistive listening systems (such as an FM transmitter and receiver shown in the telecast) in group discussions. That is, the speaker must speak into the microphone, and group discussions rarely allow time for the microphone to be passed before the speaker begins. Also, in an auditorium, the student would still want to use an assistive listening system that is connected to the PA system. This would allow the student to pick up anything that is said into any of the microphones connected to the system. (For example, in a theatrical performance it would be impractical for the microphone to be passed from actor to actor.)

The cost of these hearing aids is prohibitive for many students; nonetheless, the convenience and versatility of the equipment make them extremely useful. Because it is a part of the student's personal hearing aid, the student would be responsible for repairs. If the student were depending on this alone and something were to happen to it during the term, there would probably be a delay before services could be set up for the student via the Disability Services office.

An option that is not new but that many have never heard of is the "telecoil". Telecoils allow the hearing aid to pick up information that is transmitted via magnetic fields, for example, via an induction loop system set up in a room or auditorium, or a neck loop or silhouette attached to some other assistive listening system (instead of headphones). Hearing aids with telecoils may be set so that the telecoil is off and the microphone is on (normal to amplify sounds in the environment), or the telecoil is on and the microphone is off (for use with assistive listening devices,

and with hearing aid compatible telephones). Some have the option of keeping both on at the same time, an option that many prefer.

The problem with telecoils is that they pick up all magnetic fields, not just those that are carrying the intended speaker's voice. Anything running off electricity or a motor will give off a magnetic field that may cause interference (experienced as static or a hum by the hearing aid telecoil user). Obviously, one would expect to experience problems using telecoils in a computer lab. Those wanting to use assistive listening options around electronic equipment at home, work, or school, should explore direct audio input (DAI), a jack on the hearing aid that allows you to plug directly into the sound source, be it an ALD, computer, or TV. The sound signal does not have to go through the extra conversion to a magnetic field, thus cutting this source of interference. Many aids can be retrofitted with this option.

4. **Are there policies and practices available that colleges/universities have found to be successful in setting-up and coordinating services for students who are deaf or hard of hearing? For example, if the CART person does not show up, what happens?**

It is always difficult when the service provider must cancel, whether it is for CART, interpreting, or notetaking. If it is at all possible, a back up provider should be available. Even so, there will be times when this plan will fall through as well. Plan C is taping the lecture and transcribing (or interpreting) it as soon as possible for the student. If the service provider calls the DS office in advance, then someone from the DS office can meet the

student at the class with a tape recorder and explain the situation. It is more difficult if the service provider simply does not show up. In this case the student will miss much of what is happening in the class in trying to locate a tape recorder. Because the instructor may not know who is receiving the service, the instructor should be informed of the problem, and provide materials to the DS office for the days where services were not provided.

Policies that should *not* be set up are those that require a specific degree of hearing loss before a service will be provided. A variety of variables including room acoustics, pacing, content, and even facial hair can cause a student who normally doesn't use accommodations to request assistance. Services should be set up on an individual basis; in the case of students with a hearing loss, different situations may call for different accommodations.

Be on the lookout for keeping the entire campus accessible. Campus-wide policies should be in place addressing ordering only captioned videos, making sure equipment is available that will display the captions, checking out computer-based training programs that include video sequences to ensure that a text option is available, and developing of accessible distance training, web-based instruction, telephone menus, and phone-in registration. Also, make sure that you have the appropriate signage in rooms that are accessible (e.g., meeting rooms with fixed seating greater than 50) and indicate how individuals can pick up receivers. Oftentimes individuals who are hard of hearing are not familiar with assistive listening equipment and may not realize that equipment beyond their hearing aids is available to them.

Questions about policies and how other campuses handle specific situations can be addressed to any of several e-mail listserves available for persons working with students with hearing loss in higher education settings. These include the Postsecondary Interpreter Network (PIN), Deafness Program Administrators, and PEPNetwork. Instructions for joining these and other hearing-loss related lists can be found at <http://www.wou.edu/nwoc/ald.htm>. Finally, if you have specific questions about a policy your institution holds or would like to put in place, contact the Office for Civil Rights. This is the organization that receives complaints concerning the provision of accommodations in postsecondary institutions. They can also be a resource before problems arise. They will be happy to provide you with information about whether or not you are complying with the law, and offer suggestions. They can be reached at 1-800-421-3481 (V), 202-205-5166 (TTY) or www.ocr@ed.gov.

5. I have a student in class who is receiving C-Print captioning services and I don't understand why she also wants me to wear an FM transmitter (she is also using an ALD). Can you explain why the student should have both services?

Reading a transcript of an oral presentation is very different than reading a written presentation of the same information. When the medium used to convey a message in print, we use carefully chosen words and formatting (e.g., bullets, paragraphs) to get our points across. When the medium is spoken language, we use inflection, loudness, gesture, and speed (to name a few) to make our points. Stripped of auditory cues and body language, print

versions of spoken language may be difficult to understand.

Not all people who use FM systems are able to use them to hear and understand words. Instead, many use them to pick up these auditory cues such as pacing and emphasis that add meaning to what they are reading. Students who are hard of hearing use assistive listening devices to hear as much as they can; nonetheless, there may be a great deal that they do not hear. Remember, even missing one or two words out of each sentence can render a message meaningless. By having the print version available simultaneously, the mentally distracting and fatiguing challenge of identifying words they could not hear is alleviated. Finally, students pick up a great deal of new vocabulary in educational settings. Having the FM systems to enhance what the student is hearing will help the hard of hearing student with the correct pronunciations of this new vocabulary.

- 6. What are some guidelines for the number of TTY's colleges and universities should provide in order to assure accessibility? Does each department in the college need to have its own TTY?**

The ADA Accessibility Guidelines can be found on the internet at <http://www.access-board.gov/adaag/html/adaag.htm>. The sections applying to this are in 4.31. Signage information can be found at 4.30; information pertaining to telephones in new construction can be found at 4.1.3.(17). The guidelines vary depending on whether the phones are interior or exterior, in a bank or not, and include other helpful information concerning acoustic coupling with TTY's. While it is not required by law that each department on campus have its own TTY

and amplified phones, common sense should be used in making these decisions. The ADAAG may state that when four pay phones are located together that one should be amplified and have a TTY, but it only makes sense that student health services and campus security should be accessible, regardless of the number of phones there. These are departments that students will not only want to be able to call directly to get information, but also places where students might need to make emergency calls out. Other telephone access considerations that can make your campus more 'user friendly' to deaf and hard of hearing students include: a) publish the local Telecommunications Relay Service number (even if it is the 711 number) so that instructors and other campus employees will be aware of the number and can easily call students directly; b) publish each department's e-mail address (many people use e-mail rather than the phone); c) train people who answer the phone in various departments about how to answer a TTY call, what to expect with a Relay call, and tips on communicating with hard of hearing individuals over the phone; d) make sure that voice menu systems on campus are accessible (for a discussion of the topic, see the information on TTY access and voice services on the web page of the Technology Access Program at Gallaudet University <http://tap.gallaudet.edu>); e) make sure that telephone registration is accessible or that an alternative has been set up; and f) avoid placing the amplified phones in noisy locations.

7. Where does the responsibility lie for training the educators to effectively assimilate a deaf or hard of hearing student into their classroom?

Generally, it is the responsibility of the disability services

provider or other appointed person to ensure that the recommended and approved accommodations are provided. Thus, the responsibility for training concerning how to include students with disabilities in the class, and how to make class materials and lectures accessible, also falls to this office. Knowing that disability services (DS) providers are responsible to a large number of students and must educate faculty (and other campus personnel) on a wide variety of learning needs, these individuals should take advantage of materials and opportunities available to them.

For example, the on-line orientation to deaf and hard of hearing students developed by PEPNet and available from their website at <http://www.pepnet.org> is extremely convenient. The training takes about one hour to complete, and can be accessed 24 hours a day. A certificate can be printed to prove that the workshop was completed. This training has become very popular, especially on campuses where raises and promotions are contingent upon personnel attending faculty/staff development workshops.

Other ways to raise instructors' awareness is to provide information via the Teacher Tip Sheets developed by NETAC (Northeast Technical Assistance Center), one of the 4 PEPNet regional centers. So far, these have been developed on 24 different topics concerning students with hearing loss. They are available from the PEPNet Resource Center (PRC) website <http://prc.csun.edu> and can be downloaded in pdf format or ordered free from PRC. As each one is printed on the front and back of a single page, they are the perfect way to spread the word to busy people on a variety of topics related to deaf, hard of hearing, late deafened, and deaf blind

students in the class.

Remember, PEPNet is made up of four regional centers and 60 hub and affiliate programs across the country. Each one of these programs is creating materials for training so that you won't have to! Check the PEPNet Resource Center website for these materials, or contact your local PEPNet center to set up a training for your faculty. Other resources that may also be able to help you develop trainings include SHHH (Self Help for Hard of Hearing People www.shhh.org), NAD (National Association of the Deaf www.nad.org), ALDA (Association of Late Deafened Adults www.alda.org), CIAI (Cochlear Implant Association, Inc. www.cici.org), and the Helen Keller National Center (www.hknc.org or www.helenkeller.org). Each of these national organizations contains numerous state organizations that may be able to assist you with materials, information, and/or trainers.

8. Are C-Print captioning services considered to be an "equal access accommodation" even though it is not 100% verbatim real time?

Students may be reluctant to try summary transcription services such as C-Print and TypeWell because they have only heard of the CART services that are provided by a court reporter trained stenographer. They may believe these services are simply computerized notetaking, which they are not. While these summary services are not word-for-word transcriptions, the captionists strive for content-for-content information. Thus, if an instructor repeats a comment several times, it may only be typed once, but asterisked to indicate, for example, that this is something the instructor was stressing through repetition.

In addition, the captionist will take the speaker's incomplete sentences and spoken dysfluencies and make complete sentences and thoughts out of them. This helps make print versions of speech less ambiguous. These summary services provide real time, simultaneous print access to class lecture allowing the student to participate in discussions, an advantage that notetaking alone (computerized or not) does not allow.

As noted in the CART Provider's Manual, published by NCRA's CART Task Force, the nationally recognized Registered Professional Reporter (RPR) designation at this time is a requisite for the qualified CART provider. The RPR certifies the entry-level reporter's ability to provide a verbatim record at speeds ranging from 180 to 225 words per minute with a minimum accuracy of 95 percent. However, it is difficult to locate individuals with these qualifications in many parts of the country. (SHHH and PEPNet are working with Court Reporter associations across the country to encourage more individuals with these skills to explore working in educational settings. In the meantime, training new individuals is at least a 2 year process. This is part of the reason for the push for training individuals in the summary transcription methods. Because they use a computer keyboard, they can be trained and working in the classroom in a much shorter period of time.)

The question of whether the two services are equal comes up over and over, and the answer is, 'It depends.' These variables include: a) the captioner's speed and skill (regardless of the medium); b) the rate of the instructor's speech and the density of the content; c) the amount of class discussion; d) the service provider's ability to hear

and follow what is said in class; and e) the amount of control that is maintained over the flow of the discussion. Students should be educated about the advantages and disadvantages of each service. For example, a summary transcript of a class may be about one-third the length of a real time transcript, but contain all of the same information. This can make a huge difference for students when reviewing lectures from several classes. Most consumers assume that real time captioning presents word-for-word what is said in the class. While realtime captioners strive for this goal, they may not always achieve it. Besides speed, there may be transcription errors (the captionist types in a phonetic combination but it does not expand into the correct word) that detract from the message (this is true of all of the transcription techniques).

Some students are more reliant upon nuances of language and meaning. This may be due to personal characteristics, the speaking style of the instructor, or characteristics of the degree program. In these cases the individual will want to know exactly what was said so that they can question or challenge interactions in the class. These kinds of issues often come up in settings where students must be competitive to survive, or in graduate programs where more in-depth discussions take place. Educational videos may also be difficult for a summary transcription provider to caption in real time. These videos are often fast paced and carefully scripted so that little 'fluff' or repetition is involved. In these kinds of situations especially, you will need the most highly skilled service provider in order to provide true access. Court reporters generally have the fastest speeds. Please do remember that even the fastest providers will look amateurish if they have not been provided the vocabulary to add to their dictionaries in

advance of the class. If a word is not in the dictionary, no matter what the provider method is, the abbreviation will not expand into the proper word.

When there are questions about whether or not the person is receiving communication access, it is a good idea to have the instructor and other class members look over the transcripts. This will ensure that the student is truly gaining access, including the opportunity to join in, to all of the interactions occurring in the class. If you would like more information about the nuances of communication access, go to the Northwest Outreach Center website's communication access training module:

<http://www.wou.edu/nwoc/commaccess.htm>.

9. Does the student with hearing loss on one side need accommodations?

Hearing loss is more than a loss in volume; it often involves a loss in clarity as well. People will sometimes report, 'I can hear you, but I can't understand you'. As more research is conducted on the hearing mechanism, we understand better the interplay between the brain and understanding. We are now discovering that even mild, intermittent hearing losses can disrupt children's learning of language. It was once believed that a hearing loss in one ear was not much of a loss. Research and stories from personal experiences are showing that both ears are required not only to locate where sound is coming from, but for clarity as well. This is why it is always the recommendation that people using assistive listening systems should use a coupling device that will allow them to listen with both ears (e.g., headphones, binaural silhouettes, neckloops) rather than one ear (e.g.,

monaural silhouettes, earbuds). Sound waves surround us, but we do not get the same information in both ears. Our brains are wired to pick up these nuances. There are 'crossover' hearing aids for people who cannot use one ear that will pick up sound coming in from one side and direct it to the other ear. Remember that educational settings are communication intensive environments. In addition, the settings often have poor acoustics, are noisy, teachers wander around the room, and there are students speaking from a variety of directions. Students without a hearing loss often have difficulty, and students with a hearing loss become lost. Students reporting problems should try using an ALD. Also, when room acoustics in general are a problem, sound field amplification systems are very helpful. These systems place speakers throughout the room (and there are desktop versions of the speakers, too) so that the instructor's voice is carried to everyone. These systems take care of a variety of behavior and attention problems simply because students have easy access to the instruction instead of needing to work for it and becoming frustrated or fatigued.

10. If a student is not a VR client, whose responsibility is it to pay for an interpreter service?

If a student is not a vocational rehabilitation client, it is the responsibility of the educational institution to provide the accommodations, including interpreting services. This requirement is found in Title II (Public Services, which applies to public educational institutions) and Title III (Public Accommodations – which applies to private educational institutions). An institution cannot require a student to become a client of Vocational Rehabilitation.

11. How can institutions/organizations/agencies, obtain funding for services to students who have a hearing loss?

Funding accommodations for students with disabilities, including those who are deaf or hard of hearing, are always an issue for institutions/organizations/agencies. They need to recognize and plan for accommodations when creating their budgets. Accommodations should be part of the overall costs of doing business.

Some institutions are aggressive in their efforts to identify and secure grants. Creativity in funding is important. There are institutions/organizations/agencies, for example, that use their money earned from vending machines to supplement their funds for accommodations. Another suggestion is to look at the overall cost of providing accommodations, then divide that amount by the conservatively estimated total number of students anticipated to be in attendance at the institution/organization/agency. The cost can then be added to the tuition and fees. Keep in mind, it is forbidden to charge the student who is deaf or hard of hearing for the accommodations. If, however, the charge is factored into the overall tuition and fees and assessed to every student, it is appropriate to charge the same amount to a student with a disability.

12. Do I need to pay for real-time captioning if the student requests it, or, can I substitute C-Print captioning?

The ADA requires that institutions/organizations/agencies provide effective accommodations. If you can

demonstrate that C-Print captioning is effective for this student's needs, then you do not have to provide CART (computer assisted real-time captioning).

- 13. Currently we do not pay our note takers. We make it the student's responsibility to get his/her own volunteer note takers. Are we fulfilling our ADA obligations? If not, what do you suggest?**

The following answer is taken from the "Americans with Disabilities Act: Responsibilities for Postsecondary Institutions Serving Deaf and Hard of Hearing Students", Second Edition, by Kincaid and Rawlinson. The answer is written by Kincaid.

As mentioned above, an institution has an obligation to provide effective accommodations. There is nothing within Section 504 or the ADA that obligates an institution to pay for accommodations. In some instances, most notably, interpreter services, a failure to pay would result in a denial of services. In contrast, some colleges have been very successful with student volunteers providing notetaking services; others have not.

There are several caveats in providing notetaking services, regardless of whether the notetaker is paid. (1) A college may require the student to attend class in order to receive notes. The purpose of the notetaker is to augment what goes on in class, not to be a substitute for class attendance. (2) A college may not require a student to choose between a notetaker and an interpreter. Notetaking services, particularly for a student who is deaf, allows the student to focus on the interpreter without having to simultaneously take notes. As such students typically rely solely

on the visual information conveyed by an interpreter; taking notes, which generally requires looking down and writing, would seriously compromise their ability to follow the interpreter. (3) The notetaker must be reliable and provide copies of the notes within a reasonable period of time. Some colleges ensure that there is a back-up notetaker in case the primary notetaker fails to come to class. Some colleges train notetakers in order to better ensure their effectiveness. (4) The student needs to understand his/her obligation to notify the provider, such as the Disability Services Office, if s/he has a problem securing a notetaker, with the reliability of the notetaker or with the quality of the notes. Many institutions provide the NCR carbon paper that permits the student to receive notes immediately following the class. If the student only has one notetaker who fails to show for class, the class could always be audiotaped for later notetaking, which may also be necessary to do when an interpreter is unable to make it to the class.

14. Recent court rulings have limited the scope/definition of disabled. Do you foresee postsecondary institutions retreating from providing access for hard of hearing students?

In the Sutton v United Airlines case 5, the plaintiffs lost their case because they had vision difficulties that are corrected with glasses. In the case of hard of hearing students, I do not foresee postsecondary institutions retreating from delivery of appropriate, effective accommodations. The reason is that hearing aids do not correct a person's hearing loss; they magnify sounds, all sounds. The needs of students who are hard of hearing will vary from one individual to another. Colleges cannot,

and should not, deny appropriate accommodations to this population, lest they risk legal action.

15. In college settings where interpreters are spread thin in covering classes, is it out of the question to provide an "ASL" style interpretation for deaf students and a more English style interpreter for the HHH students in the same class?

It is not out of the question to provide both; however, I would encourage service providers in this situation to assess closely the communication needs of all parties. In many situations it is possible to provide effective communication through transliteration (ASL signs in English order), meeting the needs of all parties involved. If this is not possible, it would be acceptable to provide ASL interpretation for the deaf student and C-Print or CART services for the hard of hearing student, simultaneously.

Footnotes

¹See *Cosumnes River College (CA)*, Case No. 09-96-2002 (OCR Region IX 1996).

²See *Prince v. Rutgers, The State University School of Law - Camden*, Civ. Act. No. 89-4740 (SSB) (D.N.J., complaint filed November 14, 1989). See also *Western Oregon State College*, Case No. 10-91-2001 (OCR Region X 1991).

³*California Western School of Law*, Case No. 09-92-2004 (OCR Region IX 1992).

⁴See e.g., *University of California, Davis*, Case No. 09-92-2101-1, 4 NDLR ¶ 108 (OCR Region IX 1993).

⁵See *Sutton v. United Airlines, Inc.*, Case No. 97-1943, complaint argued April 28, 1999, decided June 22, 1999.

16. Have there been any studies conducted on the percentage of HH students who take advantage of services offered, e.g., ALD's, note takers, compared with HH students who don't?

The National Center for Education Statistics (NCES), U.S. Department of Education, released a Statistical Analysis Report in March 1994. The information is found within the PEQIS (Postsecondary Education Quick Information System) and is titled "Deaf and Hard of Hearing Students in Postsecondary Education." Data within this report indicates that there were 20,040 deaf and hard of hearing students attending postsecondary institutions across the nation during the school year 1992-1993 (These figures do not include students attending the National Technical Institute for the Deaf and Gallaudet University.) Of these, 7,770 were identified as hard of hearing, 4,520 were deaf, and the remaining 7,750 were combined into one category of deaf and hard of hearing.

Within the identified 7,770 hard of hearing students, the report further found that there were 5,270 hard of hearing students receiving support services in 2- and 4-year postsecondary educational settings. This comes to 71% of hard of hearing students being provided with accommodations.

The reader is cautioned to keep in mind that the numbers are reported by the institutions based on students identifying themselves to the institution. These numbers, therefore, are likely lower than actual figures for hard of hearing and deaf students. (See Lewis and Farris, *Deaf and Hard of Hearing Students in Postsecondary Education*, NCES Statistical Analysis Report, March 1994. NCES 94-394)

In 1999, NCES released a follow-up report on the PEQIS study. Unfortunately, there was no repetition of the study of Deaf and Hard of Hearing Students during this 5-year project. Therefore, there are no easy numbers available to compare what is happening today versus 1992-1993. However, there were 23,860 students identified as deaf/hard of hearing within this study. (See Lewis and Farris, August 1999, "An Institutional Perspective on Students with Disabilities In Postsecondary Education, NCES Statistical Analysis Report."

17. Can you explain how the cochlear implants work and what types of accommodations may be requested by students with CI's?

Cochlear implants are referred to as auditory prostheses. These devices are implanted in the inner ear. They are for people who cannot benefit from hearing aids. Cochlear implants are controversial and a personal choice.

Cochlear implants are designed to by-pass cochlear hair cells that are non-functional and provide direct stimulation to the auditory nerve. The microphone picks up sounds and sends them to the processor. The processor then selects and codes sounds that produce useful speech, music, etc. From the processor, sounds are transmitted through the skin to the receiver/stimulator via the magnetic headset. The codes are then converted to electric signals that activate the electrode arrays. The electrodes then stimulate the auditory nerve. The brain recognizes the electric signals as sounds.

Postsecondary education students, regardless of the benefit they derive from their cochlear implant, will still

require the use of support services. Some students will request either sign language or oral interpreters. Assistive listening devices (ALD's) are frequently requested by these students. Still others will ask for real-time captioning. It can be assumed that most students with cochlear implants will request notetaking services.

Another type of support these students may need is counseling to deal with issues that are a result of either having a cochlear implant or being late-deafened, both of which make the individual stand out from his/her hearing and culturally-deaf peers. It may be beneficial to identify other people in the community, either the institution or the locale, who have cochlear implants and/or became deaf beyond the age of 16. These people are valuable resources, which should not be overlooked nor underestimated.

There are other things that can be done to accommodate the student with a cochlear implant:

- DO face the person when talking;
- DO keep eye contact when speaking;
- DO speak clearly;
- DO repeat a sentence exactly. If still not understood, then choose alternative phrases to express your thoughts;
- DO monitor environmental noise;
- DO monitor environmental light;

- DON'T turn away from the deaf person's view when speaking;
- DON'T over-exaggerate your speech;
- DON'T attempt to talk over loud environmental noise: wait for the noise to stop or move to a quieter location;
- DON'T shout when speaking;
- DON'T speak with objects in or in front of your mouth.

For more information on serving students with cochlear implants, please refer to the Teacher Tipsheet: *Serving Students Who Have Cochlear Implants*, available at www.netac.rit.edu/publication/tipsheet/cochlear.html, or at the PEPNet Resource Center, <http://prc.csun.edu>.

18. Is it a reasonable accommodation for a student to request that the instructor provide notes rather relying on a co-student or notetaker? Wouldn't this diminish the possibility of communication problems?

Any prepared notes from the instructor are preferred if, in fact, they can be made available. However, this is not always possible due to illegibility or copyright issues. Also, it is important to note that instructor's notes are, by and large, not available to any student. In most cases, peer notetakers provide the hard of hearing student with a reasonably accurate transcription of the course lectures.

To take this further, some institutions assign Teaching Assistants to large 100-level or introductory courses and they often run the discussion sections for such lectures. As part of their preparation for their discussion sections,

they are required to take notes of the lectures. If such is the case, it is prudent and reasonable to ask that these be made available to the hard of hearing student.

19. What are some accommodation ideas for a student who is both blind and hard of hearing?

Students who are both blind and hard of hearing need to first address the greater disability, in this case, blindness, which means that visual or print materials will be inaccessible to this student. The hearing loss makes it increasingly difficult to get all the verbal and auditory information that is being presented.

Depending on the degree and type of hearing loss, it is strongly recommended that the student learn to access information in Braille and sign language and become fluent in both prior to starting post-secondary education. In the classroom, again depending on the degree of hearing loss, an FM system might be appropriate for a mild to moderate hearing loss but a tactile sign language interpreter might be more appropriate and effective for someone with a more severe or profound hearing loss.

If the student cannot hear verbal or auditory information well enough, certainly a tactile sign language interpreter and print materials in Braille will be reasonable. Any course notes would need to be entered into a computer for later Braille access by the student. On the other hand, a blind student with a mild to moderate hearing loss may be able to effectively use taped materials in place of print material and listen, with or without hearing aids or FM systems, to lecture materials. In place of note taking, the student should be allowed to tape-record the sessions for

later review.

20. What can colleges do to assist students who have a hearing loss to identify themselves, accept their hearing loss and utilize auxiliary services?

Students with a serious hearing loss from birth are apt to identify themselves early on especially if they have had a positive experience at the secondary level. Yet, there are those who wish to become independent and 'strike it alone' when they enter a post-secondary setting. These individuals do not wish to continue with any accommodations or support services and they often struggle academically and socially. Last but not least, there are those students who have very recently acquired a significant hearing loss and are unfamiliar with such established accommodations. When an instructor becomes concerned with a student that he or she suspects of having a hearing loss or other disability, a referral can be made to the department or office that coordinates auxiliary services. However, there are no legal means to force anyone to accept these referrals and/or recommended accommodations.

Service coordinators or providers can set up a "campus resource fair" that is open to all students and institutional staff. Information about academic and auxiliary support services should be available at such events.

Another idea is to do a presentation of campus disability resources and distribute packages of resource materials to all resident assistants. They can post the information in the residence halls for the benefit of the students living in these spaces.

What about support groups? Contact local chapters of such groups as SHHH (Self Help for the Hard of Hearing) or ALDA (Association of Late Deafened Adults) and invite them to speak at a campus awareness event. Remember May is *Better Speech and Hearing Month* but this is much too late in the academic year to reach out to the student body.

21. What are some acceptable accommodations for a student with a hearing loss who may have difficulty speaking, and is required to take a speech class?

Any student with difficult-to-understand speech should not be forced to take a speech class if the same requirement is not extended to each and every student at that institution. If the course is a requirement for an academic major, the desired outcomes must be clearly identified; an example would be the ability to research and defend oneself in a debate or public discourse.

If speech is being used as a means of expressive communication, then by all means, the student should go ahead and participate in the class with a voicing interpreter. Additionally, copies of the student's expressive remarks can be distributed to the classmates. This is something that will be more expedient at the beginning of the academic period rather than later, when classmates have become familiar and comfortable with the student's speech patterns.

22. Where do we find qualified individuals to caption university classes, both CART and C-Print?

Contact your state's central office or commission that provides information and/or direct services for individuals with hearing loss (or disabilities in general) and ask about CART or C-print captionists in your area.

On line, go to: <http://www.pepnet.org> for more information about C-print or other captioning services in your region.

AHEAD (Association of Higher Education and Disability), a professional organization of institutional service coordinators and providers may have contact names and addresses of individuals or institutions in your state. Contact them at: www.ahead.org

Also, <http://netac.rit.edu/publication/nedirectory/index.html> lists a wide variety of topics, among them, C-Print and CART (Computer Aided Realtime Translation.)

23. What suggestions do you have for an instructor when working with a student who primarily uses "speech reading" to access information?

It is essential that the instructors seek the student's input as to the optimum communication set-up in any particular situation – one-on-one, small group, large lecture hall, etc.

Helpful communication tips include:

- Not talking with your back to the class, as when writing on the blackboard.
- Write vital information (class changes, quiz or exam dates, etc.) on the board.
- Present new vocabulary in advance or write it on the board or overhead projector, since it is difficult to lip-read unfamiliar words, i.e., proper nouns and foreign words.
- Allow the student sufficient time to see as well as "hear" what is being said. This is especially important when using visual aids, demonstrating, or reading aloud.
- When showing slides or movies, keep in mind that the hard of hearing student is at a great disadvantage when trying to process information from such presentations.
- Whenever possible, use closed-captioned media or provide to the student an outline or script in advance of the material being shown.
- Repeat questions or comments being raised by classmates, as they may not be heard when first uttered.
- During discussion sections, a circle or semi-circle seating plan is most advantageous for the hard of hearing student. It is also important to establish communication rules to prevent multiple speakers and allow the hard of hearing student to use visual cues and focus on the one speaker. The hearing-impaired student may find it beneficial to have a notetaker for your class. If asked, please assist by announcing the need to the class.

24. Can I decline to provide real time captioning services if an assistive device is effective, but the student doesn't want to wear the device for appearance sake?

In the guidebook, "Americans with Disabilities Act: Responsibilities for Postsecondary Institutions Serving Deaf and Hard of Hearing Students," Second Edition, Ms. Kincaid touches on this subject. Let me quote her here:

The auxiliary aid of real time captioning has proven to be an effective accommodation for some students with hearing loss, particularly students whose primary language is English. Computer-assisted transcription devices are among those accommodations specifically mentioned in the ADA.³⁹ Here, whether the college is public or private may have some bearing on the obligation.

As mentioned above, a student who is enrolled in a private school is likely to be protected by Section 504 and if the school is not controlled by a religious organization, Title III of the ADA. Under these two provisions, a private school need only provide effective accommodations. Therefore, if a student has been doing relatively well with other forms of accommodation, the college would likely not be required to honor the student's request for captioning.

On the other hand, if the student is enrolled in a public institution, under Title II of the ADA, institutions must give "primary consideration" to the communication preferences of the individual with a disability. The Appendix to the regulations details when such a request may be denied. One reason is that another effective

accommodation exists to meet the need. Although the courts to date have not had much opportunity to interpret this provision, OCR's Region IX has, in a number of cases, interpreted this provision broadly. In contrast, another region of OCR upheld a university's refusal to provide captioning for extracurricular activities, participation in a grievance and a weekend seminar involving small group discussion.

The questioner is making the correct inquiries: (1) how well is the student doing with other accommodations; (2) would the provision of captioning enable the student to be more integrated and participatory in the classroom; (3) would other computer-assisted notetaking devices serve the student well; (4) cost; (5) availability; and (6) the appropriateness of the medium given the forum for communication (e.g., small group discussion vs. lecture format).

One final note, should a public institution deny the request for captioning on the basis of undue financial or administrative burden, that decision must be made by the head of the institution or his/her designee, submitted in writing, and set forth the reasons why, after considering the institution's resources.

In addition to Ms. Kincaid's comments, I would add that the institution needs to justify its stance that "an assistive listening device is effective" as a means of accommodation for this student. How does the institution know this? Is there documentation of the student's success using ALD's? The institution is going to have to be able to support their decision with documentation. If the institution is a public facility, they will have more responsibility to show their

decision is fair than if the institution is private because of the reasons stated by Ms. Kincaid.

One other note on this bears mentioning. If the student wants "real-time" captioning, it may be that an alternative such as C-Print would be effective. Typically, C-Print is less costly than steno captioning.

25. Do you have any suggestions on how to increase interaction to help with socialization between deaf and hearing students?

I don't usually work with the deaf, but some comments on increasing interactions between hard of hearing students and hearing peers are:

- Use ALD's to decrease communication problems,
- Train HH and hearing students in effective communication behavior techniques that decrease communication problems,
- Arrange fun events that include both groups,
- Discuss hearing loss etiologies, mechanisms, and effects with students so they understand what is involved and know why they need to alter their communication behavior,
- Play the unfair hearing test or any other items available to give hearing students some experience with what it's like to have a hearing loss.

26. Sam said, "The best lip readers only get 50% of what's being said." Then why would it be appropriate to use an oral interpreter – especially as opposed to C-Print?

C-Print is always to be preferred provided the user has

sufficient reading ability and can keep up with the pace. But if not, or if CART or C-Print is unavailable, an oral interpreter may provide visual information to supplement the auditory information being transmitted.

27. Should students with disabilities be held to the same standards pass/fail of other students after assessing their needs?

Students with disabilities should be held to the same standards as other students provided that their disability has been sufficiently accommodated. For students who are hard of hearing that means captioned videos and films, written outlines of lecture notes or adequately trained notetakers, and procedures in place to ensure that the student understands all comments and questions from their classmates. They must receive the information in some way before they can be held accountable for it.

28. How many people are considered to be hard of hearing in the United States? How many have hearing aids?

There are 28 million people who are hearing impaired; about 25 million of them are hard of hearing; the others are deaf or late-deafened. About 6 million people have hearing aids. We do not know how many of these actually wear their hearing aids.

- 29. How can a HH person who has been out of college or any educational setting for an extended period of time, find the appropriate accommodations? How best could a D/HH coordinator assist them in making some choices?**

Go to the student special services office and ask about the accommodations they provide. Join Self Help for Hard of Hearing People, Inc. (SHHH) or visit their website for information. Their telephone number is 301.657.2248. Check with your state vocational rehabilitation service to see what equipment and services they might provide for you. Gallaudet University in Washington, D.C. may also have helpful information, as will PEPNet, Monmouth, etc. Age or length of time out of school is not a factor in accessing services.

- 30. What can be done to help colleges remember all the complexities that have to be considered to meet HH students needs? And what can be done when professors don't want to cooperate?**

Training programs for college faculty and staff are helpful. Students who are hard of hearing, however, are their own best advocates, especially when supported by Student Special Services staff. So, such students need training in identifying what they need in a variety of situations in order to understand what is being said. They also need some training in techniques for requesting accommodations that increase the probability of getting them. Professors who do not cooperate should be avoided when possible and should be reported to the college administration and student special services staff with details of what was requested, what was said in response, dates, and times.

31. In the case of unexpected problems with a specific course, can you talk about undiagnosed, "masked" learning disabilities in some hard of hearing students? In some places, professionals have assumed all problems arise from hearing loss and never address the possibility of another issue. For example, a student may have no problems in math class, but is demanding accessibility in physics?

Things to look for in the case of a student doing well in one class, but not in another are:

- Student's background in each subject including previous grades in related subjects,
- Special vocabulary that might be difficult to understand,
- How information is presented, e.g., lecture, video, films, group discussion,
- Where student sits in each class, background noise in rooms, lighting in rooms,
- Professor characteristics; rate and volume of speech, foreign accent, male or female, stands still vs. walks around while talking, talks while facing the black board, is accessible to students or not, etc.,
- Time of day of classes: less tired in morning classes, less alert and more tired in afternoon classes.

32. Is there a general guideline to follow as to when a hard of hearing person should learn sign language?

That's getting to be more difficult to determine as cochlear implants get better and better and criteria for being implanted change. It is best to give the student unbiased information about cochlear implants, sign language, etc. It is probably not an issue at all unless the student has a

profound loss and/or the loss is predictably progressive to the point where residual hearing can no longer be accommodated by hearing aids and/or other assistive listening devices.

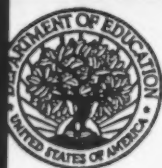
33. Please address the issues of allowing course substitutions for foreign language courses.

For more information go to 'Foreign Language Instruction: Tips for Accommodating Hard of Hearing and Deaf Students' on the Northwest Outreach Center website at <http://www.wou.edu/nwoc/forlang.htm>. A list of links is also available on the topic at <http://www.wou.edu/nwoc/fllinks.htm>. The module includes tips for service providers, interpreters, instructors, and the students themselves. It is also available for free from the PEPNet RESPONSES TO 3/15/01 TELECONFERENCE QUESTIONS.



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